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10/589,503	08/15/2006	Masato Otsuka	OTSU3004/REF	9443

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EXAMINER	
TABOR, AMARE F	
ART UNIT	PAPER NUMBER
2439	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/589,503	OTSUKA ET AL.	
	Examiner	Art Unit	
	AMARE TABOR	2439	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 July 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2,3,6,10,11,14,18 and 21-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2,3,6,10,11,14,18 and 21-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This correspondence is in response to **Amendments** and **REMARKS** filed on July 30, 2008.

2. All independent claims **[2, 3, 10 and 18]** are amended.

3. **Claims 2, 3, 6, 10, 11, 14, 18 and 21-23** are pending.

Response to Arguments

4. Applicant's arguments with respect to the pending claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2, 3, 6, 10, 11, 14, 18 and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over "Mochizuki" (US 7,020,780 B1) in view of Wei et al (US 2006/0265752 A1 - "Wei"), and further in view of Watanabe et al. (US 2002/0048327 A1 – "Watanabe")

As per Claim 2, Mochizuki teaches,

An illegal copy finding system finding an illeundulat1gal copy of an optical disc on which data and a BCA code are recorded, comprising: a recording apparatus recording [see **REPRODUCTION APPARATUS 104** in FIG.3] on the optical disc [see **OPTICAL DISC 100** in FIG.3] the BCA code constituted by a plurality of marks [see **READ OUT disc ID S1** in FIG.4] and including a secret code [see **Write Cipher Key on disc S42** in FIG.7] which is modulated in accordance with a previously determined procedure in a range capable of recognizing a position in a radial direction of the optical disc and/or a

position in a track direction of said plurality of marks as the BCA code [see for example, col.5, line 55 to col.6, line 26]; and

a management center [see **Software House 110** in FIG.3] reading the BCA code and the secret code recorded on the optical disc [see **Read out disc ID S31/S51** in Fig.6/8] so as to compare see both on the basis of an input of the correspondence between the BCA code and the secret code stored in said BCA history database [see FIG.7 and Second Embodiment; and for example, col.10, lines 3-22. See also col.11, line 46 to col.12, line 35].

Mochizuki fails to teach a BCA history database storing a history including a correspondence between the BCA code of the optical disc recording said BCA code and the secret code. However, in the same field of endeavor, **Wei** teaches a BCA history database storing a history [see **Read the disc ID 102** & **Search for the disc ID 106** in FIG.3; and for example, par.0005] including a correspondence between the BCA code of the optical disc recording said BCA code and the secret code [see **Web Server 30** in FIG.1 & **Authentication Key included 132** in FIG.3].

Therefore, it would have been obvious to a person having ordinary skill in the art, at the time of Applicants' invention, to combine the teachings of **Mochizuki** and **Wei** because both are in the fields of protecting unauthorized reproduction of optical discs. Modifying the system of **Mochizuki** by incorporating the database of **Wei** implements a disc registration mechanism, which would in turn ensure that unauthorized copying of discs is eliminated [see abstract and par.0005 of **Wei**].

Mochizuki-Wei combination teaches a range capable of recognizing a position in a radial direction of the optical disc [see **Write Cipher Key on disc S42** in FIG.7 of **Mochizuki**]; but fails to disclose secret code forms an undulation with respect to the BCA code in a range capable of recognizing recording position in a radial direction of the optical disc. However, in the same field of endeavor, **Watanabe** discloses secret code forms an undulation with respect to the BCA code in a range capable of recognizing recording position in a radial direction of the optical disc [see FIG.25; and for example

par.0003 – where **Watanabe** discloses forming undulation in a magnetic disc device as being conventional].

Therefore, it would have been obvious to a person having ordinary skill in the art, at the time of Applicants' invention was made, to modify the system of **Mochizuki-Wei** combination in order to identify the position of code-words [see at least abstract of **Watanabe**].

As per Claim 3, Mochizuki-Wei-Watanabe combination teaches,

An illegal copy finding method of finding an illegal copy of an optical disc on which data and a BCA code are recorded, comprising: a recording step [see **REPRODUCTION APPARATUS 104** in FIG.3 of **Mochizuki**] of recording on the optical disc [see **OPTICAL DISC 100** in FIG.3 of **Mochizuki**] the BCA code constituted by a plurality of marks [see **READ OUT disc ID S1** in FIG.4 of **Mochizuki**] and forming an undulating secret code [see **Write Cipher Key on disc S42** in FIG.7 of **Mochizuki**] with respect to the BCA code which is modulated in accordance with a previously determined procedure in a range capable of recognizing a recording position in a radial direction of the optical disc [see FIG.25; and for example par.0003 of **Watanabe**] and/or a position in a track direction of said plurality of marks as the BCA code [see for example, col.5, line 55 to col.6, line 26 of **Mochizuki**];

a storing step of storing a history [see **Read the disc ID 102 & Search for the disc ID 106** in FIG.3; and for example, par.0005 of **Wei**] including a correspondence between the BCA code of the optical disc recording said BCA code and the secret code in a BCA history database [see **Web Server 30** in FIG.1 & **Authentication Key included 132** in FIG.3 of **Wei**]; and a comparing step of reading the BCA code and the secret code recorded on the optical disc so as to compare both on the basis of an input of the correspondence between the BCA code and the secret code stored in said BCA history database [see FIG.7 and Second Embodiment; and for example, col.10, lines 3-22. See also col.11, line 46 to col.12, line 35 of **Mochizuki**].

As per Claim 10, Mochizuki-Wei-Watanabe combination teaches,

An illegal copy finding system finding an illegal copy of an optical disc on which data and a BCA code are recorded, comprising: a recording apparatus [see **REPRODUCTION APPARATUS 104** in FIG.3 of **Mochizuki**] recording on the optical disc [see **OPTICAL DISC 100** in FIG.3 of **Mochizuki**] the BCA code constituted by a plurality of marks [see **READ OUT disc ID S1** in FIG.4 of **Mochizuki**] and including a secret code [see **Write Cipher Key on disc S42** in FIG.7 of **Mochizuki**] which is modulated in accordance with a previously determined procedure and the secret code forms undulation with respect to the BCA code [see FIG.25; and for example par.0003 of **Watanabe**] in a range capable of recognizing a length in a radial direction of the optical disc and/or a width in a track direction of said plurality of marks as the BCA code [see for example, col.5, line 55 to col.6, line 26 of **Mochizuki**]; a BCA history database storing a history including a correspondence between the BCA code of the optical disc recording said BCA code and the secret code [see **Web Server 30** in FIG.1, **Read the disc ID 102** & **Search for the disc ID 106** & **Authentication Key included 132** in FIG.3; abstract, and for example, par.0005 of **Wei**]; and a management center [see **Software House 110** in FIG.3 of **Mochizuki**] reading the BCA code and the secret code recorded on the optical disc [see **Read out disc ID S31/S51** in Fig.6/8 of **Mochizuki**] so as to compare both on the basis of an input of the correspondence between the BCA code and the secret code stored in said BCA history database [see FIG.7 and Second Embodiment; and for example, col.10, lines 3-22. See also col.11, line 46 to col.12, line 35 of **Mochizuki**].

As per Claim 11, Mochizuki-Wei-Watanabe combination teaches,

An illegal copy finding method of finding an illegal copy of an optical disc on which data and a BCA code are recorded, comprising: a recording step of recording [see **REPRODUCTION APPARATUS 104** in FIG.3 of **Mochizuki**] on the optical disc [see **OPTICAL DISC 100** in FIG.3 of **Mochizuki**] the BCA code constituted by a plurality of marks [see **READ OUT disc ID S1** in FIG.4 of **Mochizuki**] and including a secret code [see **Write Cipher Key on disc S42** in FIG.7 of **Mochizuki**] which is modulated in accordance with a previously determined procedure and the secret code forms undulation with respect to the BCA code [see FIG.25; and for example par.0003 of **Watanabe**] in a range capable of recognizing a length in a radial direction of the optical disc and/or a width in a track direction of said plurality of marks as

the BCA code [see for example, col.5, line 55 to col.6, line 26 of **Mochizuki**]; a storing step of storing a history including a correspondence between the BCA code of the optical disc recording said BCA code and the secret code in a BCA history database [see **Web Server 30** in FIG.1, **Read the disc ID 102** & **Search for the disc ID 106** & **Authentication Key included 132** in FIG.3; abstract, and for example, par.0005 of **Wei**]; and a comparing step of reading the BCA code and the secret code recorded on the optical disc so as to compare on the basis of an input of the correspondence between the BCA code and the secret code stored in said BCA history database [see FIG.7 and Second Embodiment; and for example, col.10, lines 3-22. See also col.11, line 46 to col.12, line 35 of **Mochizuki**].

As per Claims 6 and 14, Mochizuki-Wei-Watanabe combination teaches,

wherein said recording apparatus comprises: an optical head irradiating a laser spot light on the optical disc; a BCA code memory for forming the BCA code constituted by a plurality of marks in the track direction by said laser spot light [see for example, col.5, line 65 to col.6, line 26 of **Mochizuki**]; and

a secret code memory [see **memory 104a** in FIG.3 of **Mochizuki**] storing a secret code modulated in accordance with a previously determined procedure in a range capable of recognizing positions in the radial direction of the optical disc and/or positions in the track direction of a plurality of marks forming the BCA code as the BCA code, with respect to the BCA code stored in said BCA code memory [see and **Flash Memory 22** in FIG.2; and for example, par.0017of **Wei**]; and a microprocessor [*Mochizuki and Wei disclose inherent microprocessor*] controlling the BCA code and the secret code with respect to said optical head output control portion, and wherein said microprocessor constitutes an optical disc manufacturing apparatus or a BCA code recording apparatus [see **104** in FIG.3 of **Mochizuki** and **Disc Player 20** in FIG.1 of **Wei**] which records the BCA code including the secret code on the optical disc surface by modulating the BCA code by using the secret code stored in said secret code memory while moving an optical head in the radial direction of the optical disc [see FIG.7 & 9 of **Mochizuki;** and for example, col.10, lines 3-23].

As per Claim 18, Mochizuki-Wei-Watanabe combination teaches,

wherein said recording Step includes a step of recording the BCA code including the secret code on the optical disc surface by modulating the BCA code by using the secret code stored in said secret code memory while moving the optical head in the radial direction of the optical disc [see FIG.7 & 9 of **Mochizuki;** and for example, col.10, lines 3-23].

As per Claims 21-23, Mochizuki-Wei-Watanabe teaches,

wherein the marks of said BCA code are constituted by a plurality of bars extending in the radial direction of the optical disc, a width of said bar, a position of said bar in the radial direction of the optical disc, a distance between an innermost peripheral end side and an outermost peripheral end side on the basis of a rotation center of the optical disc [see FIG.3; and for example, col.5, line 65 to col.6, line 26 of **Mochizuki**], a distance between centers of said bar in the disc track direction, and a distance between bar starting ends are standardized, and the secret code is included in the BCA code by changing said bar recording position within said plurality of standards [see FIG.7**;** and for example, col.10, lines 3-23. See also FIG.9; and for example, col.11, lines 46-53 of **Mochizuki**].

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

CONTACT INFORMATION

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to AMARE TABOR whose telephone number is (571)270-3155. The examiner can normally be reached on Mon-Fri 8:00a.m. to 5:00p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kambiz Zand can be reached on (571) 272-3811. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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